Specialist Report Format

NEPA requires all agencies to use an interdisciplinary approach for project analysis to ensure the integrated use of the natural and social sciences in planning and decision-making which may have an impact on the human environment (Section 102(2)(A)). It is the responsibility of an interdisciplinary team to integrate their collective knowledge of the physical, biological, economic, and social sciences into the analysis process. In order to meet our obligations under NEPA, each interdisciplinary team member must conduct an effects analysis that documents the predicted effects on the resource by alternative (FSH 1909.15, Chpt 10, Section 12.22).

In order to provide for consistency and improve efficiencies during the planning of project, I am requiring the styles and formatting below be followed for specialist input. Additionally, the "styles" toolbar above provides all necessary text and header formatting information. If the "Styles" toolbar is not operational, does not match the styles below, or if you have questions, please contact Casey Gatz for assistance.

- Text Font: Times New Roman
- Font Size: 11
- Margins: 1-inch
- Tables: Start numbering at 1 with consecutive whole numbers (no decimals or dashes); and use appropriate format
- Format: Do not format tables; no page breaks; no landscape layout; do not use tabs
- Each analysis should be signed and dated

Heading 1 – Arial 18 - Bold

Heading 2 – Arial 16 – Bold

Heading 3 – Arial 14 – Bold

Heading 4 – Arial 12 – Bold

Heading 5 – Arial 12 – Bold Italic

Heading 6 – Arial 10 – Bold

In addition to the format requirements outlined above, each analysis should include the information below in the order that it is presented:

Resource Area Specialist Report for Dog River Pipeline Replacement

Purpose and Need

The purpose and need for the Dog River Pipeline Replacement project was developed by comparing the desired future conditions of the pipeline to the pipelines existing condition and our commitment under an existing memorandum of understanding (MOU).

The purpose of this project is to replace the existing Dog River pipeline. There is a need for action because the pipeline has become so deteriorated that it no longer provides the most efficient way of conveying water to the City of The Dalles municipal water supply. Also, there is the need to honor the 1972 MOU between the Mt. Hood National Forest and The Dalles.

Proposed Action

The proposed action is to replace the existing pipeline with a new pipeline, allowing the City of the Dalles to fully utilize their water right. In addition to pipeline replacement, the project will repair the diversion structure and install fish screens, install a new culvert at Brooks Meadows Creek, and improve summer low flows by adding 0.5 cfs into Dog River at the point of diversion between September 1st and October 1st.

The Proposed Action would replace the existing 3.4 mile pipeline with a 24-inch-diameter ductile iron pipe. This new pipeline would parallel the alignment of the existing pipeline as much as elevation permits. Existing trees and dead wood would be cut and removed within a 25-foot corridor. Approximately 438 live trees ranging in size from 6" to 48" dbh that will be removed. Of these 438 trees, roughly 12 are larger than 24" dbh, 170 are between 12" and 14" inches, and the remaining trees are 11" and smaller. In addition to the live trees approximately 198 standing dead trees would be cut. Of these, over half are between 11" and 20" inches, roughly 3 are over 30" dbh, 22 between 20" to 30", with the remainder under 11" dbh.

An excavator would dig approximately a 4-foot deep by 3 to 4-foot wide trench, piling the spoils to either side. Gravel or sand would be brought to the excavator by a small rubber-tired or tracked vehicle. The excavator would place the pipe in the trench and then cover the pipe section with gravel or sand and fill in the ditch with the removed spoils. The pipe inlet, discharge structure, and flow measuring facilities would also be replaced. Because the existing pipeline is too fragile to handle surface vehicle traffic, the construction area would be accessed along the newly constructed section of the pipeline. Where the pipeline crosses Brooks Meadows Creek, the pipeline will be buried under the channel and the creek channel would be rehabilitated.

Road 1700-014 would be the access road for the length of the pipeline. This road is currently a rough, natural surface, single lane road that crosses Brooks Meadow Creek at an unimproved ford. The project would install a cement prefabricated open box culvert, eliminating the need for a ford crossing and also improve fish passage. During the culvert construction, the stream would be would be re-routed around the work area as the culvert is being installed.

There are several staging areas identified for the construction period **Error! Reference source not found.**. The main 1 acre staging area would be located at the 1700-014 road at the top of the hill west of the Brooks Meadow Creek Crossing, and would accommodate the transfer of pipe from the primary storage area to the construction area, it will also act as the storage area for the trees/logs removed from the corridor. Minor realignment of the 1700-014 road between Brooks Meadow Creek and the staging area

would be completed to allow for construction vehicle traffic. There are several other locations identified for storing pipe and gravel/sand: 1) on either side of the 1700-691 where it intersects with the 1700-690; 2) along road 4400-011 at the junction with road 4400; or, 3) at an old landing off of the 1700. Gravel and sand may also be stored at the junction of the 1700 and the 1700-680 roads **Error! Reference source not found.**. All the staging areas will be rehabilitated upon completion of the project.

The existing pipeline would be needed to carry water to the south fork of Mill Creek until the new pipeline is constructed. Therefore, a temporary bypass line would be used to convey water around the construction site. The bypass pipe would consist of an 8-inch aluminum sprinkler-type pipe, which could be moved by hand. Installation of the bypass pipe would be around existing trees, logs, and rock.

An existing section of the pipe, approximately 600 feet long, crosses a draw with a 10-foot fill where Surveyor's Ridge trail leaves the 1700-014. The existing fill would be removed and re-contoured along the draw. The new pipeline would be installed along the contour of the line of the drainage. This could allow drainage in the draw to function naturally.

Analysis Assumptions and Methodology

The purpose of this Biological Evaluation is to document Forest Service programs or activities in sufficient detail to determine how an action or proposed action may affect any threatened, endangered or sensitive (TES) species and their habitats (FSM 2670.5). The species considered in this report are listed as sensitive by the Pacific Northwest (Region 6) Regional Forester (revised July 2015) as well as species included in the 2001 Record of Decision Amendments to the Survey and Manage Standards and Guidelines (henceforth, the 2001 ROD) (USDA, USDI 2001). These are species for which population viability is of concern, as evidenced by current or predicted downward trends in population numbers or density, or by concerning trends in habitat availability that would reduce a species' distribution. Part of the biological evaluation is completed to determine whether a proposed action or any of the alternatives would result in a trend toward the sensitive species becoming federally listed. The goals of a BE are:

- To ensure that Forest Service actions do not contribute to the loss of viability of any native or desired non-native plant or animal species;
- To ensure that Forest Service actions do not hasten the federal listing of any species; and
- To provide a process and standard through which TES species receive full consideration throughout the planning process, thereby reducing negative impacts to species and enhancing opportunities for mitigation.

This specialist report includes all the necessary components of a biological evaluation. It discusses the existing condition and analyzes the effects of the proposed action and alternatives on sensitive plants within the Dog River Pipeline Replacement project area. This report analyzes sensitive species that are documented or suspected to occur within the general biophysical area where the project will occur. Only those species which may be directly, indirectly, or cumulatively affected by the proposed actions are considered. Species that are not suspected to occur within the analysis area, or are eliminated from consideration due to other factors, are not described and are not considered in the detailed effects analysis. However, information on these species is available at the district offices of the Mt. Hood National Forest, upon request.

Biological Evaluation Process

Under the suggested procedure for conducting a biological evaluation as described in a memo issued August 17, 1995 by the Regional Foresters of Regions 1, 4, and 6, the Biological Evaluation is a seven step process to evaluate possible effects to TES species. The seven steps are as follows:

1. Review of existing documented information
2. Field reconnaissance of the project area.

3. Determination of effects of proposed project on TES species.
4. Determination of irreversible or irretrievable commitment of resources (required for listed and proposed species only)
5. Determination of conclusions on effects.
6. Recommendations for removing, avoiding, or compensating adverse effects.
7. Documentation of consultation with other agencies, references, and contributors.

Pre-field Analysis

A pre-field analysis (or pre-field review) is used to determine the probability that TES species, and /or their respective habitats are located within or adjacent to the project area, and to determine the extent and intensity of previous survey efforts. Information from the pre-field review, in conjunction with the project description, is used to determine the need and intensity of field surveys and, in part, fulfills the standards and procedures for conducting a biological evaluation (FSM 2672.42).

A complete list of previous and historical surveys for sensitive and rare plants in the project area was determined by querying the Forest Service's Natural Resource Manager's Threatened, Endangered, and Sensitive Plant Species database (NRM TESP-IS 2019-2017) and by examining historical survey forms, maps, NEPA records and electronic botanical databases.

The following sources were consulted for the pre-field review:

- Regional Forester's Sensitive Species List (July 2015).
- *Rare threatened and endangered species of Oregon* (Oregon Biodiversity Information Center (ORBIC) 2009-August 2016).
- The Forest Service's Geographic Information System (GIS) corporate database: NRM TESP-IS.
- Species Fact Sheets provided by the Interagency Special Status Sensitive Species Program website [http://www.fs.fed.us/r6/sfpnw/issssp/] of the Pacific Northwest Region.
- USFS personnel and District botany records.
- Literature, reports, conservation plans, conservation assessments, and species descriptions on file at the Barlow Ranger District Office.

There are no known occurrences of federally listed endangered or threatened plants on the Mt. Hood National Forest and the forest has no habitat recognized as essential for listed plant species recovery under the Endangered Species Act. There are currently 335 sensitive species on the Regional Forester's Sensitive Species List and/or on the 2001 ROD that are known or suspected to occur or have habitat on the Mt. Hood National Forest. Of these, one bryophyte species was determined to have historic known sites or suitable habitat within the project area and adjacent watersheds. See Appendix 1 for the full list of species considered during the pre-field review and the summary of findings.

Multiple surveys were conducted within the project area for botanical species in the R6 Sensitive Species List (2009-2015), and 2001 ROD during the 2009, 2010 and 2011 field seasons. Field surveys were conducted using the intuitive controlled method.

Existing Condition

This project is located in an area which has been managed in the past. Some large legacy trees remain, but it is predominantly second-growth Douglas-fir, with a shrub component of oceanspray (*Holodiscus discolor)* and wild rose (*Rosa gymnocarpa)* among others. There is a healthy diversity of understory forbs and grasses within this area, especially within forest openings. The trees and shrubs have been thinned along the road systems to maintain a fuel break, and now support a dense grass and forb community. Along the pipeline itself there are several small, wetland habitats. These have been determined to be naturally created sites (see the Fisheries report for more information) which could provide potential

habitat for certain bryophyte species. Only one species was known from within this project area, and no new sites were found during project surveys.

Shistostega pennata

The goblin-moss, *Shistostega pennata*, is listed as a Class A species on the 2001 ROD. It used to be on the Regional Forester's Sensitive species list, but has been removed and does not have a state ranking with the Oregon Natural Heritage Program. There is one historic site for the goblin-moss within Brook's Meadow creek near the project area. There is one point along this creek where the pipeline and access will cross. Surveys at this site did not find any specimens. The goblin-moss is an ephemeral species which often colonizes mineral soil, most often within the root mass of recently downed trees. These sites are most common in moist areas, or sites such as caves or riparian areas which stay moist. As this bare, mineral soil becomes colonized by other bryophytes and plants after the first year, the goblin-moss will fade out (Harpel and Helliwell 2005).

Effects Analysis

No Action Alternative

Under the No Action alternative, no activities involving the pipe replacement, and all associated ground-disturbance, repair and maintenance would occur. There would be no impact to sensitive vascular plants, bryophytes, lichens and fungi.

Proposed Action

The proposed action includes ground-disturbing activities associated with removing the old, existing pipe and replacing it and other infrastructure. There is also planned, regular maintenance along this pipeline. This work will remove existing vegetation and create early seral habitats along the pipeline.

There are no current sites for sensitive vascular plants, bryophytes, lichens and fungi within this project area, so there will be no impact to any of these species.

Cumulative Effects

There are no sensitive species known from this area, so there are no cumulative effects to consider within this report.

Consistency Determination

Forest Service Policy

Alternative 1 (No Action) and Alternative 2 (Proposed Action) are consistent with the following Forest Service Standards:

- FSM 2672.1 - Sensitive Species Management. "Sensitive species of native plant and animal species must receive special management emphasis to ensure their viability and to preclude trends toward endangerment that would result in the need for Federal listing. There must be no impacts to sensitive species without an analysis of the significance of adverse effects on the populations, its habitat, and on the viability of the species as a whole. It is essential to establish population

viability objectives when making decisions that would significantly reduce sensitive species numbers."

- FSM 2670.22(2) - "Maintain viable populations of all native and desired non-native wildlife, fish and plant species in habitats distributed throughout their geographic range on National Forest System lands."

Mt. Hood National Forest Land and Resource Management Plan (Forest Plan) Direction

Alternative 1 (No Action) and Alternative 2 (Proposed Action) are consistent with the following Forestwide Standards:

- FW-148, 149 and 150 – "Management activities shall preserve and enhance the diversity of plant and animal communities, including endemic and desirable naturalized plant and animal species. The diversity of plants and animals shall be at least as that which would be expected in a natural forest; the diversity of tree species shall be similar to that existing naturally in the allotment area (36 CFR 219.27)."
- FW-162 – "Habitat management should provide for the maintenance of viable populations of existing native and desired non-native wildlife, fish (36 CFR 219.19) and plant species (USDA Regulation 9500-4) well distributed throughout their current geographic range within the National Forest System.
- FW-174 - "Threatened, endangered and sensitive plants and animals shall be identified and managed in accordance with the Endangered Species Act (1973), the Oregon Endangered Species Act (1987), and FSM 2670."
- FW-175 – "Habitat for threatened, endangered, and sensitive plants and animals shall be protected and/or improved."
- FW-176 – "Biological Evaluations (FSM 2672.4) shall be prepared for all Forest Service planned, funded, executed, or permitted programs and activities for possible effects on endangered, threatened or sensitive species."

2001 Survey and Manage Record of Decision

Alternative 1 (No Action) and Alternative 2 (Proposed Action) are consistent with the survey protocols 2001 Survey and Manage Record of Decision. All botany surveys included consideration of botanical species in table C-3 of the 2001 Survey and Manage Record of Decision.

NFMA Implementing Regulations

Alternative 1 (No Action) and Alternative 2 (Proposed Action) are consistent with the following regulations:

- 36 CFR 219.19 - "Fish and wildlife habitat shall be managed to maintain viable populations of existing native and desired non-native vertebrate species in the planning area. For planning purposes, a viable population shall be regarded as one which has the estimated numbers and distribution of reproductive individuals to insure its continued existence is well distributed in the planning area. In order to insure that viable populations would be maintained, habitat must be provided to support, at least, a minimum number of reproductive individuals and that habitat must be well distributed so that those individuals could interact with others in the planning area."

- The 1983 USDA Departmental Regulation 9500-4 provides further direction to the Forest Service, expanding the viability requirements to include plant species:

"Habitats for all existing native and desired non-native plants, fish, and wildlife species would be managed to maintain at least viable populations of such species. In achieving this objective, habitat must be provided for the number and distribution of reproductive individuals to ensure the continued existence of a species throughout its geographic range . . . Monitoring activities would be conducted to determine results in meeting population and habitat goals."

Summary of Effects by Alternative

Under alternative 1 no activities related to the replacement of the pipeline would occur. This would have no impact on sensitive vascular plants, bryophytes, lichens and fungi.

Alternative 2 would involve the replacement of the current pipeline and all associated ground-disturbance, repair and maintenance. This would have no impact on sensitive vascular plants, bryophytes, lichens and fungi.

/s/ Christina Mead
Christina Mead
Eastzone Botanist and Invasive Species Coordinator
Hood River/Barlow Ranger District, Mt. Hood National Forest

References

Harpel, J. and R. Helliwell. 2005. Conservation Assessment for Schistostega pennata (Hedw.) Web & Mohr. USDA Forest Service and USDI Bureau of Land Management.

Hitchcock, C.L. and A. Cronquist. 1987. Flora of the Pacific Northwest. Seattle: University of Washington Press.

Interagency Special Status/Sensitive Species Program (ISSSSP) species factsheets for bryophytes, lichens, and fungi. USDA Forest Service and USDI Bureau of Land Management. http://www.fs.fed.us/r6/sfpnw/issssp/

Mount Hood National Forest Land and Resource Management Plan. 1990

National Resources Manager (NRM) Threatened, Endangered, and Sensitive Plants – Invasive Species (TESP-IS) database (2016).

Oregon Biodiversity Information Center. 2016. Rare, Threatened and Endangered Species of Oregon. Institute for Natural Resources, Portland State University, Portland, Oregon. 130 pp.

Regional Forester's Special Status Species List. USDA Forest Service- Pacific Northwest Region. Updated July 2015.

USDA Forest Service Manual

US Department of Agriculture, Forest Service, Regions 1, 4, and 6. 17 Aug 1995 Memo (File Code 2670/1950): Streamlining Biological Evaluation and Conclusions for Determining Effects to Listed, Proposed, and Sensitive Species. Salwasser, H., D. Bosworth, and J. Lowe.

USDA Forest Service and USDI Bureau of Land Management. 1994. Record of Decision for Amendments to Forest Service and Bureau of Land Management Planning Documents within the Range of the Northern Spotted Owl and Standards and Guidelines for Management of Habitat for Late-successional and Old-Growth Forest Related Species within the Range of the Northern Spotted Owl. Portland, OR.

USDA Forest Service & USDI Bureau of Land Management. 2001. Record of Decision and Standards and Guidelines for Amendments to the Survey and Manage, Protection Buffer, and other Mitigation Measures Standards and Guidelines (January 2001). Portland, OR.

USDA Forest Service & USDI Bureau of Land Management. 2004. Record of Decision to Remove or Modify the Survey and Manage Mitigation Measure Standards and Guidelines (January 2001). Portland, OR.